

translatory movement, which soon causes their dispersion in the circumambient fluid. These are the spermatozoids of *P. bursaria*. Iodine, alcohol, and acetic acid instantly stop their movements; they are insoluble in the last-mentioned reagent when concentrated, although this dissolves all the other elements of the body, with the exception of the green granules.

It is usually from the fifth to the sixth day following the copulation, that the first germs are seen to make their appearance in the form of small rounded bodies, formed of a membrane which is rendered very evident by acetic acid, and greyish, pale, homogeneous, or almost imperceptibly granular contents, in which neither nucleus nor contractile vesicle is yet to be distinguished. These organs do not appear until afterwards. The observations of Stein and F. Cohn have shown how these embryos quit the body of the mother in the form of *Acinetæ* furnished with knobbed tentacles,—true suckers by means of which they remain for some time still adherent to the mother, deriving their nourishment from her substance; but their investigations did not reveal to them the ultimate fate of these young animalcules. I have been able to follow them for a considerable time after they detached themselves from the body of the mother, and have convinced myself that, after losing their suckers, becoming surrounded with vibratile cilia, and obtaining a mouth which first shows itself in the form of a longitudinal furrow, they definitely acquired the form of the mother, becoming penetrated in the same way by the green granulations characteristic of this *Paramécium*, without undergoing any more important metamorphoses.

BIBLIOGRAPHICAL NOTICE.

A Cyclopædia of the Natural Sciences. By WILLIAM BAIRD, M.D., F.L.S. London and Glasgow. Griffin, 8vo, 1858.

THAT the preparation of even a popular dictionary of the Natural Sciences, including the wide range of Zoology, Botany and Mineralogy, is a task from which any one man might be well excused for recoiling, will be readily admitted on all hands;—such a work is a gigantic undertaking, in which complete success can hardly be looked for. In the present case, the difficulty is not lessened by the fact that the information to be communicated on this extensive series of subjects had to be selected and compressed, so as to occupy only a single volume; and although this is a stout octavo of more than six hundred pages, those who are at all familiar with natural history will scarcely need to be told that the work of selection and compression must have been an arduous piece of business.

Making due allowance for the acknowledged difficulties besetting

his undertaking, it must be admitted that, with some exceptions, to which we shall hereafter advert, Dr. Baird has succeeded in producing a tolerably satisfactory work, at least so far as the zoological and botanical articles are concerned ;—most of the mineralogical notices are of little value, and many of them contain no information whatever.

Even the zoological articles, however, are hardly so good as we should have expected from a writer of Dr. Baird's acknowledged powers ; we should have been glad to see the characters of the great groups of animals rather more definitely stated, and we have here and there detected errors of greater or less importance in matters of fact, which ought to have been familiar to the author's mind. Of these we need only cite two or three instances. At p. 17 we are told that the true Crocodiles "are all found in the Old World,"—a statement which is contradicted by the author himself at pp. 177 and 178 ; at p. 279 the *Hectocotylus* is said to be the male of the Cephalopods to which it belongs ; in common with most other writers, Dr. Baird erroneously describes the viviparous *Aphides* as wingless ; and at p. 262 he states that it is the female Stickleback that watches its nest. In the same place, his words would indicate that the *Gasterosteus Spinachia* alone of all the Sticklebacks is a nest-building species ; although in the preceding page he gives a large woodcut of the common *G. aculeatus* with its nest. The articles on the different classes of monsters also appear to us to be quite out of place in a work of this description.

But we must pass from these minor matters to the consideration of a more serious and, to us, quite unexpected defect in the zoological portion of this Cyclopædia of the Natural Sciences,—a confusion which will effectually prevent even the most laborious student from acquiring any clear idea of zoological classification from its pages, and which is evidently due to the author's having set about his task with no definite system preconceived in his own mind. This is betrayed even by the table of the classification of animals prefixed to his work, according to which the animal kingdom consists only of *three* subkingdoms,—the Vertebrata, Mollusca, and Articulata,—the latter including everything from Insects to Sponges, and forming fourteen classes *numbered consecutively*. At the first glance, we were doubtful whether Dr. Baird might not have some hidden meaning in adopting this course,—whether it might not be intended to indicate, that, the position of the Echinodermata on one side or the other of the line of demarcation between the Annulosa and Radiata being still a disputed point, this line itself might be equally considered as mythical, and therefore disregarded. Such an idea naturally sent us in all haste to consult the body of the work, to see what reasons might be adduced there in support of such revolutionary views ; but our curiosity was doomed to be disappointed,—the old subkingdoms of Articulata and Radiata stood in their proper alphabetical rank ; and, to make the matter worse, the line of demarcation was rendered more mythical still by the Eutozoa being cited as forming a class under both. Other confusions of a similar nature occur frequently on comparing the table of classification with the body of the work ; numerous groups

note

are mentioned in the one and not in the other ; and it is evident that the table was prepared after the completion of the rest of the book, and with little or no reference to it. Even in some of the articles themselves we find evident traces of the same confusion of ideas,—a glaring instance of which is exhibited by the notices on the *Macropidæ* and *Marsupialia* : in the former the whole of the Marsupials are referred to the family *Macropidæ*, and placed, in accordance with Dr. Gray's views, amongst the *Feræ* (in the table) ; whilst in the latter the *Macropidæ* constitute only one family of the *Marsupialia*.

We trust that should the work come to a second edition, Dr. Baird will endeavour to remove the causes of these objections, and thus furnish the public with what is much wanted,—a reliable work of reference on general Natural History. The publisher has evidently done his part well ;—for a cheap work, the volume is well printed ; the illustrations are numerous, and many of them new ; and a useful map of the geographical distribution of some of the principal forms of animals is attached to it.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

January 26, 1858.—P. L. Sclater, Esq., F.L.S., in the Chair.

NOTICE OF A NEW GENUS OF UROPELTIDÆ FROM CEYLON, IN THE COLLECTION OF THE BRITISH MUSEUM. BY DR. J. E. GRAY, F.R.S., V.P.Z. AND ENT. SOC. ETC.

In examining the reptiles recently acquired in the British Museum, Mr. Edward Gerrard observed a Saurian from Ceylon, which he believed to be new. I have great pleasure in sending a description of it to the Society, and in naming it after Mr. Gerrard, the preparer of the osteological specimens and of the animals in spirits in the British Museum, who has a most extraordinary empirical knowledge of the osteology of the different vertebrated animals and of the species of reptiles and fish.

MITYLIA, n. g.

Head tapering in front, acute ; rostral scale produced, compressed, acute, bluntly keeled above and below. Tail very short, subconical, rounded, covered with very close-set rough scales, each marked with two slight ridges of small asperities, with a central terminal rough oblong plate furnished with a perpendicular blunt keel ; subcaudal shields in five rows, central series rather wider, six-sided ; vent with two shields in front, and one in front of them between their bases.

MITYLIA GERRARDI.

Black ; sides with a series of short white perpendicular bands ; underside white, with a black spot in the middle of each scale, a